

ABSTRACT OF THE DISCLOSURE

The invention describes a vitamin receptor binding drug delivery conjugate, and preparations therefor. The drug delivery conjugate consists of a vitamin receptor binding moiety, a bivalent linker (L), and a drug. The vitamin

5 receptor binding moiety includes vitamins, and vitamin receptor binding analogs and derivatives thereof, and the drug includes analogs and derivatives thereof. The vitamin receptor binding moiety is covalently linked to the bivalent linker, and the drug, or the analog or the derivative thereof, is covalently linked to the bivalent linker, wherein the bivalent linker (L) includes components such as spacer linkers,

10 releasable linkers, and heteroatom linkers, and combinations thereof. Methods and pharmaceutical compositions for eliminating pathogenic cell populations using the drug delivery conjugate are also described.